

**REMARKS****Summary of the Office Action**

Claims 1, 2, 5, 6, 9, 10, 13, and 14 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Persyk et al. (U.S. Patent No. 5,148,029) in view of Ito (Japanese Patent Document No. 63-215987).

Claims 3, 7, 11, and 15 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Persyk et al. in view of Ito as applied to claims 1, 5, 9, and 13 above, and further in view of Winn et al. (U.S. Patent No. 5,168,540).

Claims 4, 8, 12, and 16 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

**Summary of the Response to the Office Action**

Applicants have amended claims 4, 8, 12, and 16. Applicants have added new claims 17-24.

Applicants express appreciation for the indication in the Office Action that claims 4, 8, 12, and 16 are directed to allowable subject matter. Applicants have rewritten these claims in independent form in accordance with the Examiner's recommendation. Therefore, Applicants submit that claims 4, 8, 12, and 16 should now be in condition for allowance.

Applicants traverse the pending prior art rejections. In this regard, Applicants submit that the applied references, whether taken alone or in combination, do not disclose or suggest any of Applicants' claimed combinations comprising a substrate, a flat resin film formed on the substrate, a reflecting film formed on the flat resin film, and a scintillator formed on the

reflecting film, as required by independent claims 1 and 5; or any of Applicants' claimed methods comprising the steps of forming a flat resin film on a substrate, forming a reflecting film on the flat resin film, and forming a scintillator on the reflecting film, as required by independent claims 9 and 13.

The Office Action relies on Persyk et al. as the primary reference in all of the pending rejections. According to the Office Action, backcap 12 of Persyk et al. corresponds to the recited transparent substrate and scintillation crystal 14 of Persyk et al. corresponds to the recited scintillator. As recognized by the Examiner, "Persyk does not disclose the claimed arrangement of a resin film formed on said substrate and a reflecting film formed on said resin film." Office Action, page 3, lines 1-3.

More particularly, Persyk et al. discloses that scintillation crystal 14 is formed above backcap 12 and that there is an air gap between backcap 12 and scintillation crystal 14 (reference numerals 12 and 14 from Persyk et al. reference). In Applicants' claimed invention, on the other hand, a reflecting film 14 and resin film 12 are formed between scintillator 16 and substrate 10 rather than an air gap (reference numerals 16 and 10 from instant application). Thus, as recognized by the Examiner, the topology of the claimed invention is different than that of Persyk et al., and Persyk et al. by itself does not disclose or suggest any of Applicants' claimed combination.

Neither Ito nor Winn et al. makes up for the deficiencies in Persyk et al. Ito, for example, discloses a resin layer 8 formed over reflecting film and exposed to the surrounding or outside air. The resin layer 8 of Ito is a protective film for reflecting film 7, but there is no member in Ito that could be said to correspond to the recited substrate of the present invention. Moreover,



as shown in Fig. 3 of Ito, which is a magnified view in that reference, the surface of resin film 8 has a corrugated inner surface. This is in contrast to the present invention, in which, for example, flat resin film 12 has a flat surface (e.g., not corrugated) on which the reflecting film 14 is formed and the resin film 12 is sandwiched between reflecting film 14 and substrate 10. Thus, even if all the references were to be combined in the manner suggested by the Examiner, the resulting combination would still not correspond to any of Applicants' claimed combinations in which a flat resin film is formed on a substrate, a reflecting film is formed on the flat resin film, and a scintillator is formed on the reflecting film.

In view of the foregoing, Applicants submit that the prior art does not disclose or suggest any of the combinations recited in independent claims 1, 5, 9, and 13, or any of the claims depending from such independent claims. Accordingly, for at least the foregoing reasons, Applicants traverse, and respectfully request reconsideration and withdrawal of, the rejections set forth in the pending office Action.

Attached hereto is a marked-up version of the changes made to the claims by the current amendment. The attached page is captioned "Version with markings to show changes made."

### CONCLUSION

In view of the foregoing, Applicants respectfully request reconsideration and the timely allowance of the pending claims. Should the Examiner feel that there are any issues outstanding after consideration of this response, the Examiner is invited to contact Applicants' undersigned representative to expedite prosecution. A favorable action is awaited.

If there are any other fees due in connection with the filing of this response, please charge the fees to our Deposit Account No. 50-0310. If a fee is required for an extension of time under 37 C.F.R. § 1.136 not accounted for above, such an extension is requested and the fee should also be charged to our Deposit Account.

Respectfully submitted,

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**VERSION WITH MARKINGS TO SHOW CHANGES MADE****IN THE CLAIMS**

New claims 17-24 have been added.

Claims 4, 8, 12, and 16 have been amended as follows:

4. (Amended) A scintillator panel ~~[according to claim 3]~~ **comprising a radiation-transparent substrate, a flat resin film formed on said substrate, a reflecting film formed on said flat resin film, and a scintillator formed on said reflecting film, wherein at least a part of said scintillator is covered with a transparent organic film,** wherein said transparent organic film **covers over all the surfaces of said scintillator, and wherein said transparent organic film** reaches to the surfaces of said substrate.

8. (Amended) A radiation image sensor ~~[according to claim 7]~~ **comprising a radiation-transparent substrate, a flat resin film formed on said substrate, a reflecting film formed on said flat resin film, a scintillator formed on said reflecting film, and an imaging device disposed so as to face said scintillator, wherein at least a part of said scintillator is covered with a transparent organic film,** wherein said transparent organic film **covers over all the surfaces of said scintillator, and wherein said transparent organic film** reaches to the surfaces of said substrate.

12. (Amended) A method of making a scintillator panel ~~[according to claim 11, wherein said transparent film]~~ **comprising the steps of:**

**forming a flat resin film on a radiation-transparent substrate;**

forming a reflecting film on said flat resin film;  
forming a scintillator on said reflecting film; and  
covering at least a part of said scintillator with a transparent organic film, such that  
said transparent organic film covers all the surfaces of said scintillator and reaches to the  
surfaces of said substrate.

16. (Amended) A method of making a radiation image sensor ~~[according to claim 15,~~  
~~wherein said transparent film]~~ comprising the steps of:

forming a flat resin film on a radiation-transparent substrate;  
forming a reflecting film on said flat resin film;  
forming a scintillator on said reflecting film;  
disposing an imaging device opposite said scintillator; and  
covering at least a part of said scintillator with a transparent organic film, such that  
said transparent organic film is covering all the surfaces of said scintillator and reaches to  
the surfaces of said substrate.